

Applicants: Zhang and Hofmann
Application No.: 09/966,390
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In the Claims

Please amend claims 1, 5, 16, 22, 24, 28, 31, 48, 50, 57, 59, 60, 62, 64-66, 69, 71, and 79 to read as follows:

a 1. (Amended) A method for treating degenerative skin conditions in a subject in need thereof, said method comprising applying at least one electric pulse to the surface of a region of skin substantially contemporaneously with application thereto of a composition comprising L-ascorbic acid, or a cosmetically/pharmaceutically acceptable salt, ester or other derivative thereof, said electric pulse having sufficient strength and duration to deliver an effective amount of the L-ascorbic acid or the derivative thereof through the stratum corneum of the region of skin so as to improve the condition of the region of skin without substantial pain or skin irritation.

a2 5. (Amended) The method according to claim 1 wherein the composition is formulated as a cream, spray or lotion.

a3 16. (Amended) The method according to claim 15 wherein the pulse duration is in the range from about 500 μ sec to about 50 msec.

a4 22. (Amended) The method according to claim 1 wherein the pH of the composition is in the range from about 1.85 to about 5.0 and delivery of the L-ascorbic acid, or the derivative thereof, is enhanced as compared with passive delivery thereof.

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as
24. (Amended) The method according to claim 1 wherein the pH of the composition is in the range from about 1.85 to about 3.9 and the delivery of the L-ascorbic acid, or the derivative thereof, is enhanced as compared with passive delivery thereof.

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28. (Amended) A method for electroporation-enhanced dermatological delivery of L-ascorbic acid through the stratum corneum of a subject in need thereof, said method comprising applying at least one electric pulse to the surface of a region of skin substantially contemporaneously with application thereto of a composition comprising ascorbic acid, or a cosmetically/pharmaceutically acceptable salt, ester or other derivative thereof, said electric pulse having sufficient strength and duration to cause electroporation of the region of skin, thereby topically delivering L-ascorbic acid or a derivative thereof through the stratum corneum of the skin.

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31. (Amended) The method according to claim 28 wherein the composition is formulated as a cream, spray or lotion.

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48. (Amended) The method according to claim 28 wherein the pH of the composition is in the range from about 4.0 to about 5.0 and delivery of the L-ascorbic acid or the derivative thereof is enhanced as compared with passive delivery thereof.

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50. (Amended) The method according to claim 28 wherein the pH of the composition is in the range from about 1.85 to about 3.9 and the topical delivery of the L-ascorbic acid or the derivative thereof is enhanced as compared with passive delivery thereof.

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a 10
57. (Amended) A handheld pulser for use as an electroporation apparatus, said pulser comprising:
a) a support member of a size and shape to be handheld, and
b) an electrode detachably attached to the support member and operatively connected to a pulse generator.

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59. (Amended) A handheld pulser according to claim 57, wherein said electrode has an electrically conducting cover.

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60. (Amended) A handheld pulser according to claim 59, wherein said electrode comprises a porous reservoir for containing and dispensing a therapeutic agent.

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62. (Amended) A handheld pulser according to claim 57, further comprising a detachable electrode mounting bracket attached to the support structure for mounting the detachable electrode.

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64. (Amended) A handheld pulser according to claim 62, wherein said electrode mounting bracket and electrode have a shape selected from square, round, contoured, [or] and tube shaped.

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65. (Amended) A handheld pulser according to claim 64, wherein said tube shaped electrode mounting bracket has a central core comprising an axle, about which said electrode mounting bracket and electrode are rotatable.

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A 13
66. (Amended) A handheld pulser according to claim 63, wherein said electrode comprises an adhesive layer for attachment of said electrode to said electrode mounting bracket.

A 14
69. (Amended) A handheld pulser according to claim 68, said meander type electrode comprises an interweaving array of electrically conductive electrode fingers coated on a thin film.

A 15
71. (Amended) A handheld pulser according to claim 58, wherein said pulse generator is powered by a battery, optionally contained within said support member.

A 16
79. (Amended) A handheld pulser according to claim 57, further comprising a unit to measure and record skin resistance of a subject.